

IN THE CLAIMS

Claims 26 and 29 have been amended.

New claims 39-48 have been added.

Claims 1-25 and 37-38 were previously canceled.

Claims 26-36 and 39-48 are currently pending in the application.

1. (Canceled).
2. (Canceled).
3. (Canceled).
4. (Canceled).
5. (Canceled).
6. (Canceled).
7. (Canceled).
8. (Canceled).
9. (Canceled).
10. (Canceled).
11. (Canceled).
12. (Canceled).
13. (Canceled).
14. (Canceled).
15. (Canceled).
16. (Canceled).
17. (Canceled).
18. (Canceled).
19. (Canceled).
20. (Canceled).
21. (Canceled).

- 22. (Canceled).
- 23. (Canceled).
- 24. (Canceled).
- 25. (Canceled).

26. (Currently Amended) A method for cleaning a portion of a protective shield that is disposed within a conduit or aperture of a pipe, the pipe defining an inlet and an outlet, the conduit for passing fluid from the inlet to the outlet of the pipe, the protective shield containing a measuring device, the method comprising:

providing a scraper disposed about at least a portion of the protective shield within the conduit;

applying an external force to the scraper to move the scraper within the conduit and longitudinally along the protective shield between first and second positions to thereby clean the portion of the protective shield over which the scraper moves.

27. (Original) A method according to claim 26, wherein the measurement device comprises a temperature sensor.

28. (Original) A method according to claim 26, wherein at least a portion of the scraper comprises a magnetic material, whereby the external force comprises an electromagnetic force.

29. (Currently Amended) A method according to claim 26, wherein the protective shield is disposed within the a pipe.

30. (Original) A method according to claim 29, wherein the external force is generated by at least one solenoid or permanent magnet installed outside the pipe.

31. (Original) A method according to claim 29, wherein the external force is generated by two solenoids installed outside the pipe.

32. (Original) A method according to claim 31, wherein the pipe has a circumference and each solenoid is mounted around the entire circumference of the pipe.

33. (Original) A method according to claim 29, wherein the pipe is generally tubular and the apparatus further comprises:

a first solenoid mounted circumferentially around at least a portion of the pipe and polarized with an S-N polarity; and

a second solenoid mounted circumferentially around at least a portion of the pipe next to the first solenoid and polarized with an N-S polarity;

whereby the solenoids create an electromagnetic field that move the scraper longitudinally along the protective shield between the first position and the second position.

34. (Original) A method according to claim 33, wherein the scraper comprises:

a scraping element slidably disposed about at least a portion of the outer perimeter of the protective shield between the first and second positions; and

a magnetic core attached to the scraping element and positioned between the scraping element and the solenoids.

35. (Original) A method according to claim 34, wherein the scraping element is generally tubular and is disposed about the entire outer perimeter of the protective shield.

36. (Original) A method according to claim 35, wherein the magnetic core is generally cylindrical and is concentrically disposed about the scraping element.

37. (Canceled).

38. (Canceled).

39. (New) The method of claim 26, further comprising limiting movement of the scraper between first and second positions within the shield within the conduit of the pipe.

40. (New) The method of claim 26 being performed in an aseptic environment.

41. (New) The method of claim 40 being performed within an aseptic food processing environment.

42. (New) The method of claim 26, applying the external force to the scraper to move the scraper being enabled by magnetically coupling a magnetic portion of the scraper and a magnetic portion of an element installed outside of the pipe.

43. (New) The method of claim 26, the scraper being coaxially disposed within the conduit of the pipe.

44. (New) The method of claim 26, the scraper being asymmetrically disposed within the conduit of the pipe.

45. (New) The method of claim 26, applying the external force comprising continuously applying an external force to the scraper.

46. (New) The method of claim 45, wherein the scraper is always attracted or repelled by one of two magnetic elements disposed outside of the conduit of the pipe.

47. (New) The method of claim 27, the measurement device being centrally disposed within the conduit of the pipe.

48. (New) The method of claim 27, the measurement device being centrally disposed within the protective shield.